



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,837	02/22/2002	Brad Simon	TELE 49076	3130

7590 03/11/2005

Robert P. Lenart
Pietragallo, Bosick & Gordon
One Oxford Centre, 38th Floor
301 Grant Street
Pittsburgh, PA 15219

EXAMINER

DANIELS, ANTHONY J

ART UNIT	PAPER NUMBER
----------	--------------

2615

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,837

Applicant(s)

SIMON ET AL

Examiner

Anthony J. Daniels

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-12 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 13-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 2, Line 9, "...must necessary..." must be changed to "...necessary must...".

Appropriate correction is required.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claim 5 is objected to because of the following informalities: The wording of the claim is such that it does not make sense, although the examiner understands what the applicant is claiming from the specification. Appropriate correction is required. Suggested Change: (Preamble needs no correction.); "...locating the image pixels that correspond to a predetermined characteristic of the mirror support structure."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2612

4. Claims 1-3,7,8,10-12,17 are rejected under 35 U.S.C. 102(e) as being anticipated by Komiya et al. (US # 6,744,931).

Claims 10-12,17 will be discussed first.

As to claim 10, Komiya et al. teaches a panoramic photographic system (Figure 4A) comprising: a camera (Figure 4A, CMD "8" and CMD "9") for generating a panoramic image (Figure 5A and Figure 5B) including a plurality of image pixels (Figure 5A and Figure 5B, dij; Col. 10, Lines 42-59); and a processor for identifying a first set of the image pixels that correspond to the unwanted portions of an image (Figure 7, displacement detecting circuit "24"; Col. 12, Lines 10-19, "...displacement of the overlap region,..."; *{It is inherent in the system of Komiya et al. that the displacement detecting circuit identifies the overlap region.}*), for determining particular characteristics of the image pixels positioned adjacent to the image pixels in the first set of image pixels (Figure 7, interpolation circuit "25"; Figure 5A and Figure 5B; Col. 15, Lines 42-65, "...reads the pixel values vb, vc, vd, and ve from the frame memory."; *{The pixels of imaging area b and c are also part of the overlap region d.}*), and for replacing the first set of image pixels with replacement pixel data generated by using the particular characteristics of the image pixels adjacent to the first set of image pixels (Figure 7, interpolation circuit "25"; Col. 15, Lines 50-67; Col. 16, Lines 1-7; *{The interpolated value, va, is the new value of the pixel, dij, which will be part of the corrected panoramic image.}*).

As to claim 11, Komiya et al. teaches the panoramic photographic system of claim 10, wherein the replacement pixel data (Col. 15, Lines 62-67, va) is generated by interpolating the particular characteristics of the image pixels adjacent to the first set of image pixels (Col. 15, Lines 50-67).

Art Unit: 2612

As to claim 12, Komiya et al. teaches the panoramic photographic system of claim 10, wherein the replacement pixel data is generated by extrapolating the particular characteristics of the image pixels adjacent to the first set of image pixels (Col. 15, Lines 50-56, "...reads the pixel values v_b , v_c , v_d , and v_e from the frame memory.").

As to claim 17, Komiya et al. teaches the panoramic photographic system of claim 10, wherein the particular characteristics include: red, green and blue color information. (Figure 114A, Col. 53, Lines 1-65).

As to claims 1-3, claims 1-3 are method claims corresponding to the apparatus claims 10-12, respectively. Therefore, claims 1-3 are analyzed and rejected as previously discussed with respect to the apparatus claims 10-12, respectively.

As to claim 7, Komiya et al. teaches the method of claim 1, wherein the step of identifying a first set of the image pixels that correspond to the unwanted portions of an image comprises the step of: determining particular characteristics of the unwanted portion of the image (Col. 12, Lines 16-18, "...displacement of the overlap region...").

As to claim 8, claim 8 is a method claim corresponding to the apparatus claim 17. Therefore, claim 8 is analyzed and rejected as previously discussed with respect to the apparatus claim 17.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

Art Unit: 2612

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya et al. (see Patent Number above).

Claim 18 will be considered first.

As to claim 18, Komiya et al. teaches the method of claim 1. However Komiya et al. does not specifically teach the particular characteristics including: hue, saturation, and intensity.

Official Notice is taken that the use of hue, saturation, and intensity to draw conclusions about the characteristics of color pixels is well known in the art. It would have been obvious to use such characteristics as the particular characteristics, because one of ordinary skill in the art would recognize that the same information could be extrapolated from RGB information as HSI; furthermore, HSI can be found by a transformation of RGB values. *Examiner cites US # 6603878.*

As to claim 9, claim 9 is a method claim corresponding to the apparatus claim 18.

Therefore, claim 9 is analyzed and rejected as previously discussed with respect to the apparatus claim 18.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya et al. (see Patent Number above) in view of Ishiguro et al. (US # 6,157,018).

As to claim 19, Komiya et al. teaches the panoramic photographic system of claim 10. The claim differs from Komiya et al. in that it further requires a curved reflective mirror; and means for mounting the curved reflective mirror to the camera, wherein the mounting means includes at least one strut positioned in a field of view of the camera.

In the same field of endeavor, Ishiguro et al. teaches a panoramic photographic system (Figure 1) which includes a curved reflective mirror (Figure 1, convex mirror "1"); and a means for mounting the curved reflective mirror to the camera (Figure 1, transparent cylinder "3"), wherein the mounting means includes at least one strut positioned in a field of view of the camera (Figure 1, transparent cylinder "3" is itself a strut). In light of the teaching of Ishiguro et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to include said attachments to the panoramic photographic system of Komiya et al., because an artisan of ordinary skill in the art would recognize that such an imaging system would allow the user to take images of 360 degree surroundings (see Ishiguro et al., Col. 1, Lines 5-7) without rotation of the camera.

Allowable Subject Matter

7. Claims 4-6,13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: As to claim 4,13, the prior art does not teach or fairly suggest unwanted portions of the image corresponding to portions of the image containing a mirror support structure. As to claim 5, the prior art does not teach or fairly suggest locating the image pixels that correspond to a predetermined characteristic of the mirror support structure (see Claim Objection above). As to claim 6, the prior art does not teach or fairly suggest calibrating the location of structure that produces the unwanted portion of the image. As to claim 14-16, claims 14-16 are objected to as being dependent upon the allowable claim 13.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Daniels whose telephone number is (571) 272-7362. The examiner can normally be reached on 8:00 A.M. - 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Groody can be reached on (571) 272-7950. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AD
3/7/2005



NGOC YEN VU
PRIMARY EXAMINER